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# PATENT SPECIFICATION



Application Date : Nov. 11, 1920. No. 31,917 / 20.

167,712

Complete Accepted : Aug. 18, 1921.

## COMPLETE SPECIFICATION.

### Improvements in or relating to Stoppering Machines for Bottles.

I, WILLIAM BARR, of 686, Garscube Road, Maryhill, Glasgow, of British nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The subject of this invention is a machine for use in stoppering bottles of the type equipped with screw stoppers, the object of the invention being to provide means whereby the stopper will be screwed home with a uniform torque.

The invention is concerned more particularly with machines of the type including a revoluble spindle provided with a throat for engagement with a stopper, means for feeding the bottle and therewith the stopper towards the throat, a driver for the spindle and a slip clutch so interposed between the driver and the spindle that, when a predetermined torque is imparted to the stopper, operative connection between the driver and the spindle is disestablished.

The present invention is characterised by the feature that the slip clutch interposed between the driver and the spindle is constituted by a latch member mounted in a pulley and engageable with a driving pin secured on the spindle, the latch member being urged towards operative position by a spring and so arranged that, when the pulley is rotated by means of a belt, the spindle is driven until the resistance to its rotation is such that the action of the spring is overcome and the latch member disengages the driving pin, the tension of the spring being so regulated that the slip clutch just slips when the stopper is screwed home.

The invention is illustrated in the accompanying drawing in which Fig. 1 is an elevation and Fig. 2 is a plan of the slip clutch drawn to a larger scale.

[Price 1/-]

As shown, the improved stoppering machine comprises a revoluble spindle 1 mounted in a frame 2 equipped with means for feeding the bottle into the position for the stoppering operation the means preferably comprising a pillar 4 movable vertically in a guide 5 and operable by a treadle 6, the pillar being provided with a rubber seat 4". The revoluble spindle 1 is fitted on the lower end with a throat 7 presenting an internal conical surface which is preferably corrugated or serrated and is engageable with the peripheral edge of the stopper.

The spindle 1 is associated with a driver constituted by a pulley 8 journaled on a stationary sleeve 9 secured to the frame 2. Within the pulley 8 is pivotally mounted a latch member 10 engageable with a driving pin 11 secured to the spindle 1, the latch member 10 being urged towards operative position by a spring 12, the tension of which is regulated by a suitable regulating screw 13.

The latch member 10 is shown in the position in which the operative surface is disengaged from the driving pin 11. An abutment stud 14 serves to limit the travel of the member 10.

It will be seen that, when the pulley 8 is rotated as by means of a belt 15, the spindle 1 will be driven until the resistance to its rotation is such that the action of the spring 12 is overcome and the latch member 10 disengages the driving pin 11. The tension of the spring is so regulated that the slip clutch just slips when the stopper is screwed home.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

In a machine of the type herein referred to, the feature that the slip clutch inter-

posed between the driver and the spindle is constituted by a latch member mounted in a pulley and engageable with a driving pin secured on the spindle, the latch member being urged towards operative position by a spring and so arranged that, when the pulley is rotated as by means of a belt, the spindle is driven until the resistance to its rotation is such that the action of the spring is overcome and the

latch member disengages the driving pin, the tension of the spring being so regulated that the slip clutch just slips when the stopper is screwed home.

Dated this 10th day of November, 1920. 15

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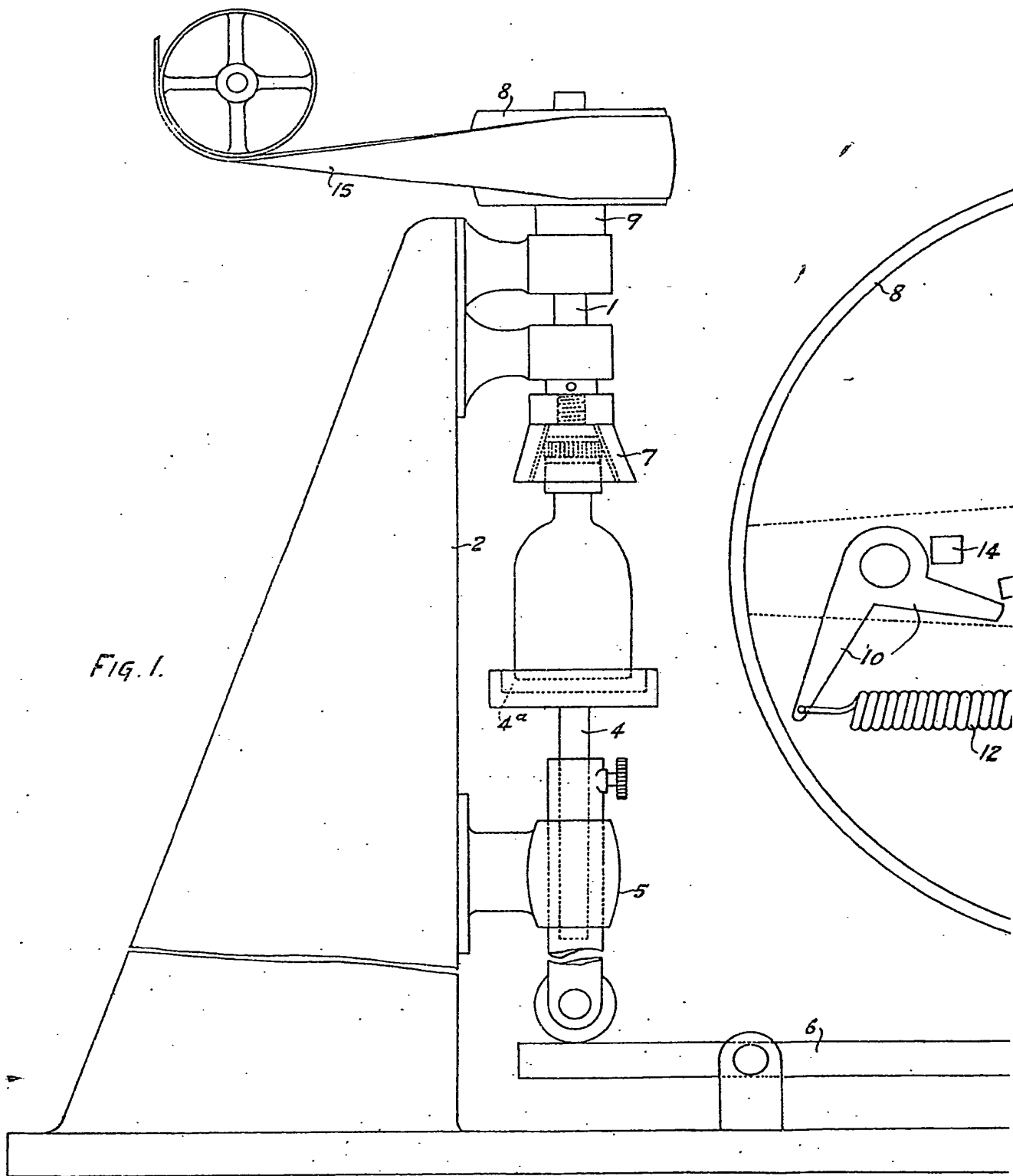


Fig. 1.

[This Drawing is a reproduction of the Original on a reduced scale.]

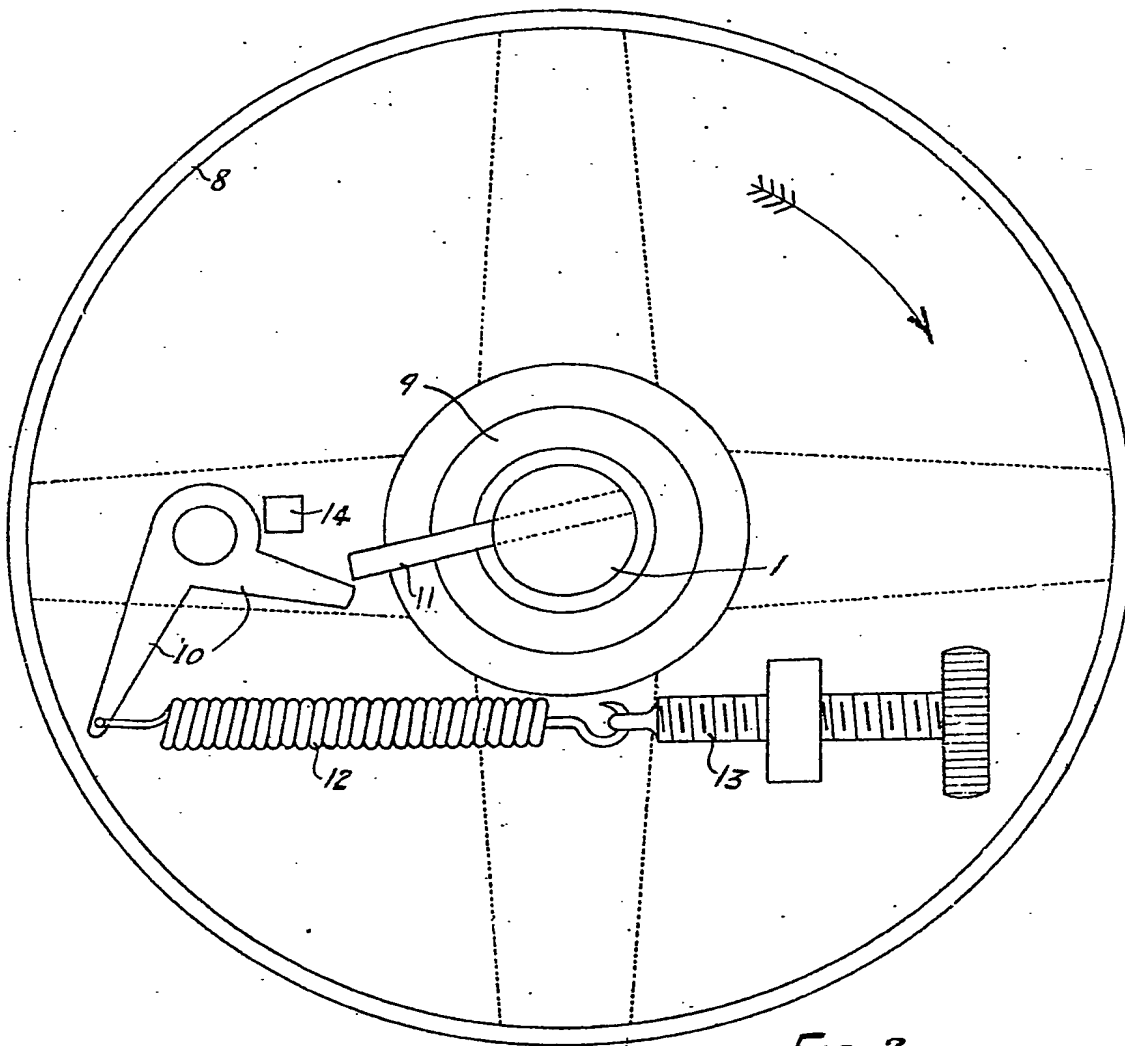
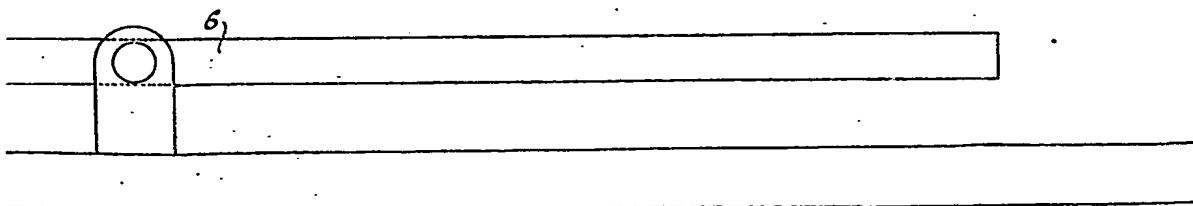


Fig. 2.



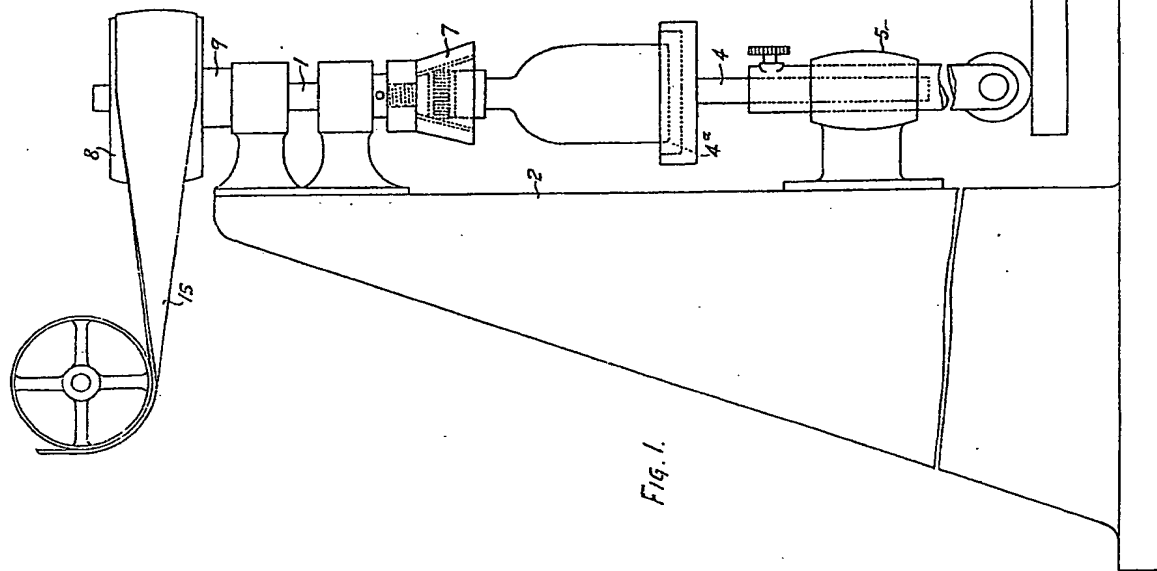


Fig. 1.

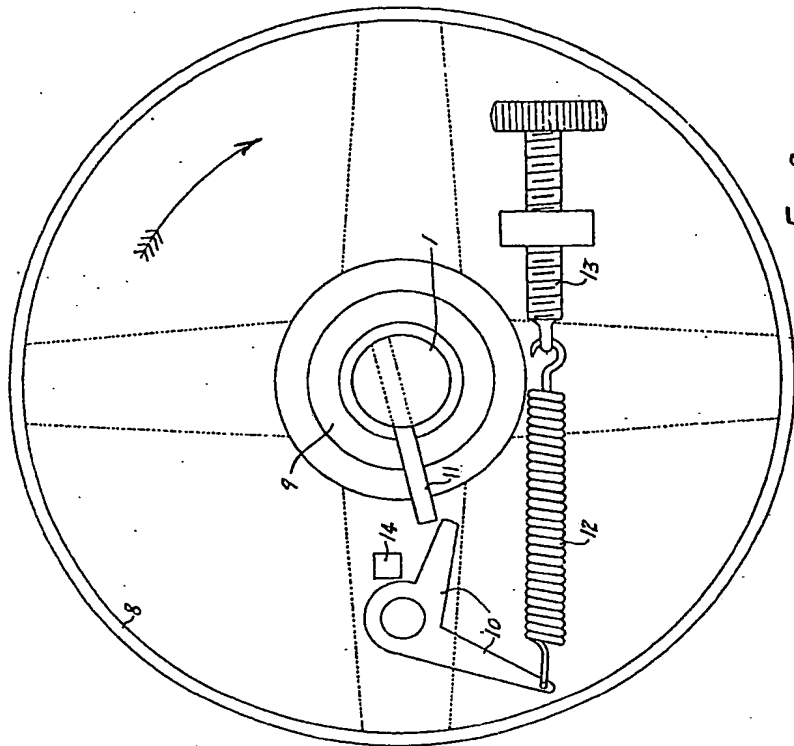


Fig. 2.

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